

IN THE SPECIFICATION:

Please amend the paragraph at Col. 2, line 65 to Col. 3, 19 to read as follows:

The feed gas from storage or fresh makeup to the hyperpolarization unit is normally under elevated/superatmospheric pressure, although it is discharged from the hyperpolarization unit at essentially atmospheric pressure so that it can be inhaled and exhaled by the patient with minimal loss to the ambient atmosphere. After the contaminated gas is returned to the system, it is moved onward through the system at vacuum/subatmospheric pressure by means of a vacuum pump. Depending on the type of decontamination process units used to remove the exhalant gases, the contaminated gas may be compressed to superatmospheric pressure before being passed through the decontamination process units, it may be passed through the decontamination process units at subatmospheric pressure with pressurizing compression occurring only on the quantity purified image enhancing gas after decontamination, or compression may take place at some point intermediate in the passage through the various decontamination units. Regardless of which of these options is used, the purified gas ultimately will be returned to gas storage under superatmospheric pressure so that it can be recycled and reused for subsequent image imaging procedures.

Please amend the paragraph at Col. 5, line 62 to Col. 6, line 31 to read as follows:

In order to place the present invention in a normal operational context, the FIGURE includes a brief section showing (in alternate location lines) a typical use of the hyperpolarized gas in a medical imaging procedure, exemplified here by a magnetic resonance (MR) lung scan procedure using He³ being conducted in a MRI unit 52. The hyperpolarized gas is vented from unit 50 through line 53 to a collection container 56

which is commonly a small gas tight bag, such as a bag made of TedlarTM fabric. The closed bag 56 filled with the image enhancing gas is then transported to MRI unit 52 where the patient inhales the gas from the bag, holds his or her breath while the lungs are imaged with an MRI scan, and then exhales into a second similar bag 57. Normally the patient will exhale into bag 57 several times to clear as much of the He³ from his or her lungs as possible. (Bag 57 will normally be larger than bag 56 53 to contain the larger volume of the patient's exhalations.) The He³ concentration in bag 57 may be as low as 1%-2% and still be capable of advantageous recovery in the system 10. After the last exhalation by the patient, the bag 57 is passed back to the purification and collection system 10 of the present invention through line 62. Also returned through line 62 is the uninhaled portion of gas in bag 56, which itself usually now contains some environmental contaminants from having been opened for the patient's inhalation, as well as any contaminants that the patient may have injected by any exhalation into the bag 56 before inhaling the gas for the MRI procedure. (It is understood that during other types of MRI procedures, such as MR brain scans with Xe¹²⁹, the patient will just inhale and exhale the gas to fill his or her lungs, from which the gas will eventually pass into the blood stream and then on to the brain. After the inhalations and exhalations have been completed, the bags 56 and 57 are returned to current purification and collection system as described above. The actual MRI scan will be done some time later, when the imaging gas has dispersed into the brain.)

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